

terrain in pertinent directions using the methods in § 73.684 of this part and using the appropriate F(50,10) chart from Figure 9a, 10a, or 10c of § 73.699 of this part.

(i) In cases where a TV broadcast station has been authorized facilities that do not meet the interference protection requirements of this section, an application to modify such a station's facilities will not be accepted if it is predicted to cause new interference within the protected contour of the Class A TV or digital Class A TV station.

(j) In support of a request for waiver of the interference protection requirements of this section, an applicant for a TV broadcast station may make full use of terrain shielding and Longley-Rice terrain dependent propagation methods to demonstrate that the proposed facility would not be likely to cause interference to Class A TV stations. Guidance on using the Longley-Rice methodology is provided in *OET Bulletin No. 69*, which is available through the Internet at <http://www.fcc.gov/oet/info/documents/bulletins/t69>.

[65 FR 3001, May 10, 2000]

§ 73.614 Power and antenna height requirements.

(a) *Minimum requirements.* Applications will not be accepted for filing if they specify less than –10 dBk (100 watts) horizontally polarized visual effective radiated power in any horizontal direction. No minimum antenna height above average terrain is specified.

(b) *Maximum power.* Applications will not be accepted for filing if they specify a power which exceeds the maximum permitted boundaries specified in the following formulas:

(1) Channels 2–6 in Zone I:

$$ERP_{\text{Max}} = 102.57 - 33.24 * \log_{10}(\text{HAAT})$$

And,

$$-10 \text{ dBk} \leq ERP_{\text{Max}} \leq 20 \text{ dBk}$$

(2) Channels 2–6 in Zones II and III:

$$ERP_{\text{Max}} = 67.57 - 17.08 * \log_{10}(\text{HAAT})$$

And,

$$10 \text{ dBk} \leq ERP_{\text{Max}} \leq 20 \text{ dBk}$$

(3) Channels 7–13 in Zone I:

$$ERP_{\text{Max}} = 107.57 - 33.24 * \log_{10}(\text{HAAT})$$

And,

$$-4.0 \text{ dBk} \leq ERP_{\text{Max}} \leq 25 \text{ dBk}$$

(4) Channels 7–13 in Zones II and III:

$$ERP_{\text{Max}} = 72.57 - 17.08 * \log_{10}(\text{HAAT})$$

And,

$$15 \text{ dBk} \leq ERP_{\text{Max}} \leq 25 \text{ dBk}$$

(5) Channels 14–69 in Zones I, II, and III:

$$ERP_{\text{Max}} = 84.57 - 17.08 * \log_{10}(\text{HAAT})$$

And,

$$27 \text{ dBk} \leq ERP_{\text{Max}} \leq 37 \text{ dBk}$$

Where:

ERP_{Max} = Maximum Effective Radiated Power measured in decibels above 1 kW (dBk).

HAAT = Height Above Average Terrain measured in meters.

The boundaries specified are to be used to determine the maximum possible combination of antenna height and ERP_{dBk} . When specifying an ERP_{dBk} less than that permitted by the lower boundary, any antenna HAAT can be used. Also, for values of antenna HAAT greater than 2,300 meters the maximum ERP is the lower limit specified for each equation.

(6) The effective radiated power in any horizontal or vertical direction may not exceed the maximum values permitted by this section.

(7) The effective radiated power at any angle above the horizontal shall be as low as the state of the art permits, and in the same vertical plane may not exceed the effective radiated power in either the horizontal direction or below the horizontal, whichever is greater.

(c) *Determination of applicable rules.* The zone in which the transmitter of a television station is located or proposed to be located determines the applicable rules with respect to maximum antenna heights and powers for VHF stations when the transmitter is located in Zone I and the channel to be employed is located in Zone II, or the transmitter is located in Zone II and the channel to be employed is located in Zone I.

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